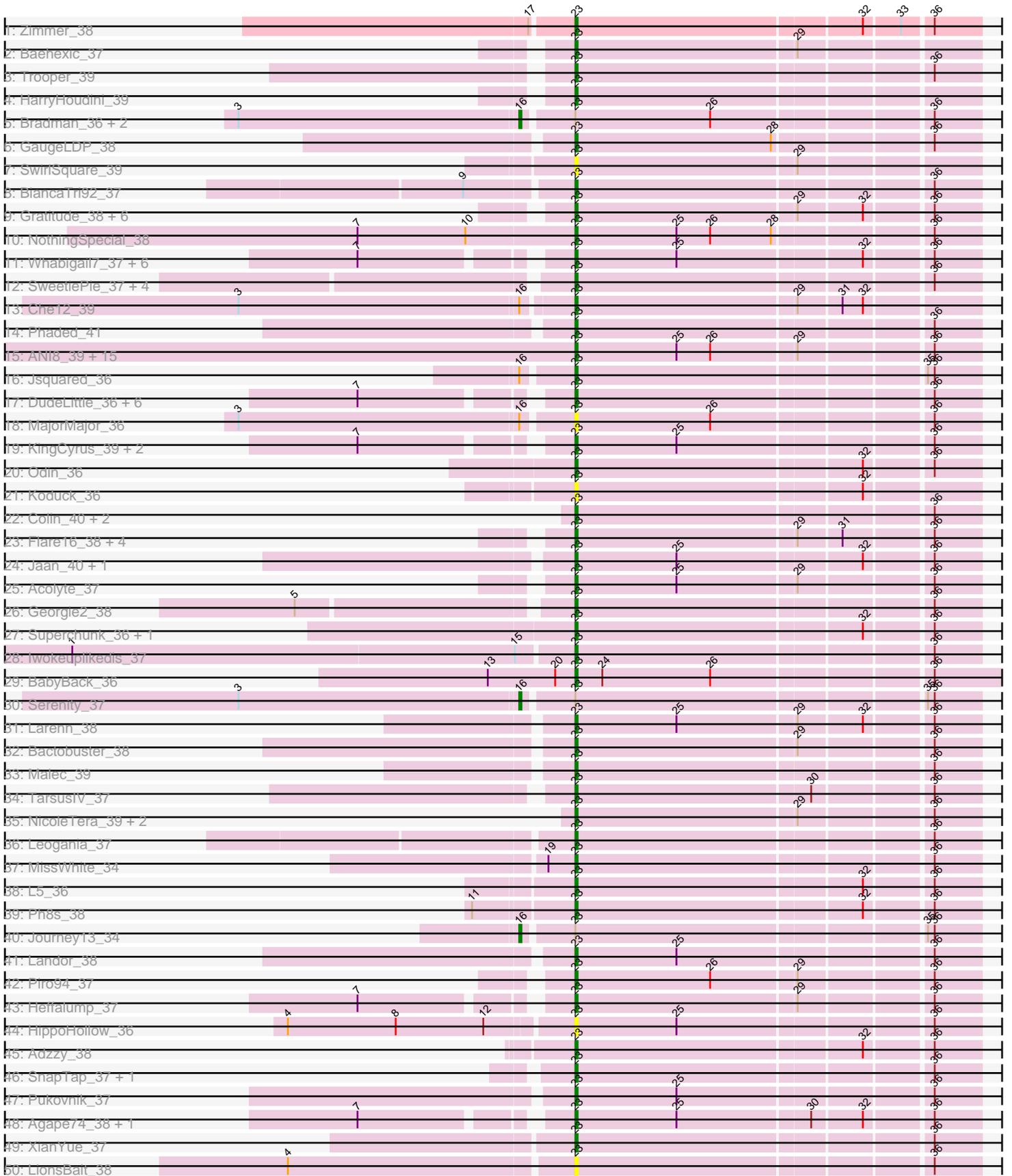Pham 283458

Pham 283458

Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly with annotated starts, the track will be further scaled to only show that region of the ORF with annotated starts. This action will be indicated by adding "Zoomed" to the title. For starts, yellow indicates the location of called starts comprised solely of Glimmer/GeneMark auto-annotations, green indicates the location of called starts with at least 1 manual gene annotation.

Pham 283458 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283458 has 240 members, 33 are drafts.

Phages represented in each track:
• Track 1 : Zimmer_38
• Track 2 : Baehexic_37
• Track 3 : Trooper_39
• Track 4 : HarryHoudini_39
• Track 5 : Bradman_36, Quokka_35, TipsytheTRex_35
• Track 6 : GaugeLDP_38
• Track 7 : SwirlSquare_39
• Track 8 : BiancaTri92_37
• Track 9 : Gratitude_38, Updawg_39, Equemioh13_39, Terrific_41, Centaur_39, Drake55_40, WideWale_39
• Track 10 : NothingSpecial_38
• Track 11 : Whabigail7_37, AbbyPaige_38, Jerm_38, Dignity_38, Leviathan_38, LilTurb_37, Smeagan_39
• Track 12 : SweetiePie_37, Crucio_37, QueenBeesly_37, FiringLine_37, Power_36
• Track 13 : Che12_39
• Track 14 : Phaded_41
• Track 15 : ANI8_39, StarStuff_39, Pomar16_39, Naji_39, C3_34, AN3_36, DBQu4n_39, Duplo_39, VC3_39, D29_36, Tomathan_39, AN9_39, Kerberos_39, D32_39, Travvers_39, VA6_36
• Track 16 : Jsquared_36
• Track 17 : DudeLittle_36, Retro23_38, Anselm_38, Fameo_37, QueenB2_37, Dalmatian_38, JoshKayV_38
• Track 18 : MajorMajor_36
• Track 19 : KingCyrus_39, ChipMunk_39, EvilGenius_39
• Track 20 : Odin_36
• Track 21 : Koduck_36
• Track 22 : Colin_40, Kalpine_37, Trixie_37
• Track 23 : Flare16_38, Bugsy_40, Sknot_38, NaSiaTalie_38, MiculUcigas_38
• Track 24 : Jaan_40, IronMan_38
• Track 25 : Acolyte_37
• Track 26 : Georgie2_38
• Track 27 : Superchunk_36, Caraxes_37
• Track 28 : Iwokeuplikedis_37
• Track 29 : BabyBack_36
• Track 30 : Serenity_37
• Track 31 : Larenn_38
• Track 32 : Bactobuster_38

- Track 33 : Malec_39
- Track 34 : TarsusIV_37
- Track 35 : NicoleTera_39, Pharaoh_35, WeiHuaDA_42
- Track 36 : Leogania_37
- Track 37 : MissWhite_34
- Track 38 : L5_36
- Track 39 : Ph8s_38
- Track 40 : Journey13_34
- Track 41 : Landor_38
- Track 42 : Piro94_37
- Track 43 : Heffalump_37
- Track 44 : HippoHollow_36
- Track 45 : Adzzy_38
- Track 46 : SnapTap_37, SemperFi_38
- Track 47 : Pukovnik_37
- Track 48 : Agape74_38, Turbido_37
- Track 49 : XianYue_37
- Track 50 : LionsBait_38
- Track 51 : EpicPhail_38, Grub_38, Vix_38, Microwolf_38, Taurus_38, Dieselweasel_38, Watson_38, LBerry_38, StepMih_38, MadMarie_38, PGHhamlin_40, Fernando_38, Croquant_39, Lowa_38, MuchMore_40, PotatoSplit_39, Bigflo_38, Malinsilva_40, Farber_38, GingkoMaracino_38, Aglet_38, Wooldri_40, MarQuardt_38, Tiffany_38, Anubis_40, Colbster_38, DaHudson_38, P28Green_38, Grum1_38, Phoebe_38, Jobu08_37, AugsMagnumOpus_40, Gwennie_37, Zetzy_37, JenCasNa_38, SoYo_38, Snickers_38, Mainiac_38, Pembroke_38, Ollie_38, LugYA_40, Cullens_38, BreSam8_38, JHC117_38, SoilDragon_37, GtownJaz_38, MoneyMay_38, Beauxregard13_38, Grif_38, Marie_38, Montavir_37, Sabinator_37, Stagni_38, Sabia_38, Hercules11_38, Lilith_38, Penny1_38
- Track 52 : Marius_38, Kalb97_38, Reba_38, Phranny_38, Calvinny_38, ACFishhook_37, Groupthink_38, Manu_38, JeppNRM_38, Gemma_37, Pawn_37, Heliosoles_37, PhishRPhriends_36, Kalnoky_38, PurpleHaze_37
- Track 53 : ClownCar_38, HaveUMetTed_38, OlanP_37
- Track 54 : SheldonCooper_36, Rockstar_35, LeoAvram_35, TroyPia_35, BabyRay_35, BangNhom_35, Heathen_35, DropBear_35, Puppy_36, TinaFeyge_35, ChampagnePapi_36, Roimos_35, Cerulean_36, Polymorphads_35, MA5_35, Clammy_35, BabyJohn_34, Bugatti_35, Zarafa_35, Commander_35, Chiqui_34, Fred313_35, BellusTerra_35, TNguyen7_35, Eurydice_35, Medusa_35, Kampy_35, Scout_35, Pistachio_36, JF4_35, Phantastic_35, JF2_35, LHTSCC_36, Nebs_35, Giroux_36, Morrow_35, Eagle_34, MK4_35, BlueBird_36, HelDan_35, Maxo_35, Melvin_36, Sparxx_35, Isca_35, Abdiel_34, SaturnRing_35, Obama12_36, Ohfah_35, Marchesa_35, Phelipe_35, Idleandcovert_35, B1_33
- Track 55 : Yecey3_38
- Track 56 : Mask_83
- Track 57 : Nebulanyx_20, KNG13_20, Pauu_19, CabbageMan_18, LauKoruNamu_19
- Track 58 : Corgi_20, CheeseDanish_20
- Track 59 : Shambre1_51

Summary of Final Annotations (See graph section above for start numbers):

The start number called the most often in the published annotations is 23, it was called in 88 of the 207 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• AN3_36, AN9_39, ANI8_39, AbbyPaige_38, Acolyte_37, Adzzy_38, Agape74_38, Anselm_38, BabyBack_36, Bactobuster_38, Baehexic_37, BiancaTri92_37, Bugsy_40, C3_34, Caraxes_37, Centaur_39, Che12_39, ChipMunk_39, Colin_40, Crucio_37, D29_36, D32_39, DBQu4n_39, Dalmatian_38, Dignity_38, Drake55_40, DudeLittle_36, Duplo_39, Equemioh13_39, EvilGenius_39, Fameo_37, FiringLine_37, Flare16_38, GaugeLDP_38, Georgie2_38, Gratitude_38, HarryHoudini_39, Heffalump_37, HippoHollow_36, IronMan_38, Iwokeuplikedis_37, Jaan_40, Jerm_38, JoshKayV_38, Jsquared_36, Kalpine_37, Kerberos_39, KingCyrus_39, Koduck_36, L5_36, Landor_38, Larenn_38, Leogania_37, Leviathan_38, LilTurb_37, LionsBait_38, MajorMajor_36, Malec_39, MiculUcigas_38, MissWhite_34, NaSiaTalie_38, Naji_39, NicoleTera_39, NothingSpecial_38, Odin_36, Ph8s_38, Phaded_41, Pharaoh_35, Piro94_37, Pomar16_39, Power_36, Pukovnik_37, QueenB2_37, QueenBeesly_37, Retro23_38, SemperFi_38, Sknot_38, Smeagan_39, SnapTap_37, StarStuff_39, Superchunk_36, SweetiePie_37, SwirlSquare_39, TarsusIV_37, Terrific_41, Tomathan_39, Travvers_39, Trixie_37, Trooper_39, Turbido_37, Updawg_39, VA6_36, VC3_39, WeiHuaDA_42, Whabigail7_37, WideWale_39, XianYue_37, Yecey3_38, Zimmer_38,

Genes that have the "Most Annotated" start but do not call it:
• Bradman_36, Journey13_34, Quokka_35, Serenity_37, TipsytheTRex_35,

Genes that do not have the "Most Annotated" start:
• ACFishhook_37, Abdiel_34, Aglet_38, Anubis_40, AugsMagnumOpus_40, B1_33, BabyJohn_34, BabyRay_35, BangNhom_35, Beauxregard13_38, BellusTerra_35, Bigflo_38, BlueBird_36, BreSam8_38, Bugatti_35, CabbageMan_18, Calvinny_38, Cerulean_36, ChampagnePapi_36, CheeseDanish_20, Chiqui_34, Clammy_35, ClownCar_38, Colbster_38, Commander_35, Corgi_20, Croquant_39, Cullens_38, DaHudson_38, Dieselweasel_38, DropBear_35, Eagle_34, EpicPhail_38, Eurydice_35, Farber_38, Fernando_38, Fred313_35, Gemma_37, GingkoMaracino_38, Giroux_36, Grif_38, Groupthink_38, Grub_38, Grum1_38, GtownJaz_38, Gwennie_37, HaveUMetTed_38, Heathen_35, HelDan_35, Heliosoles_37, Hercules11_38, Idleandcovert_35, Isca_35, JF2_35, JF4_35, JHC117_38, JenCasNa_38, JeppNRM_38, Jobu08_37, KNG13_20, Kalb97_38, Kalnoky_38, Kampy_35, LBerry_38, LHTSCC_36, LauKoruNamu_19, LeoAvram_35, Lilith_38, Lowa_38, LugYA_40, MA5_35, MK4_35, MadMarie_38, Mainiac_38, Malinsilva_40, Manu_38, MarQuardt_38, Marchesa_35, Marie_38, Marius_38, Mask_83, Maxo_35, Medusa_35, Melvin_36, Microwolf_38, MoneyMay_38, Montavir_37, Morrow_35, MuchMore_40, Nebs_35, Nebulanyx_20, Obama12_36, Ohfah_35, OlanP_37, Ollie_38, P28Green_38, PGHhamlin_40, Pauu_19, Pawn_37, Pembroke_38, Penny1_38, Phantastic_35, Phelipe_35, PhishRPhriends_36, Phoebe_38, Phranny_38, Pistachio_36, Polymorphads_35, PotatoSplit_39, Puppy_36, PurpleHaze_37, Reba_38, Rockstar_35, Roimos_35, Sabia_38, Sabinator_37, SaturnRing_35, Scout_35, Shambre1_51, SheldonCooper_36, Snickers_38, SoYo_38, SoilDragon_37, Sparxx_35, Stagni_38, StepMih_38, TNguyen7_35, Taurus_38, Tiffany_38, TinaFeyge_35, TroyPia_35, Vix_38, Watson_38, Wooldri_40, Zarafa_35, Zetzy_37,

Summary by start number:

Start 14:
• Found in 1 of 240 (0.4%) of genes in pham
• Manual Annotations of this start: 1 of 207
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Shambre1_51 (singleton),

Start 16:
• Found in 8 of 240 (3.3%) of genes in pham
• Manual Annotations of this start: 3 of 207
• Called 62.5% of time when present
• Phage (with cluster) where this start called: Bradman_36 (A2), Journey13_34 (A2), Quokka_35 (A2), Serenity_37 (A2), TipsytheTRex_35 (A2),

Start 18:
• Found in 1 of 240 (0.4%) of genes in pham
• Manual Annotations of this start: 1 of 207
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Mask_83 (AD),

Start 20:
• Found in 8 of 240 (3.3%) of genes in pham
• Manual Annotations of this start: 3 of 207
• Called 87.5% of time when present
• Phage (with cluster) where this start called: CabbageMan_18 (FE), CheeseDanish_20 (FE), Corgi_20 (FE), KNG13_20 (FE), LauKoruNamu_19 (FE), Nebulanyx_20 (FE), Pauu_19 (FE),

Start 21:
• Found in 75 of 240 (31.2%) of genes in pham
• Manual Annotations of this start: 68 of 207
• Called 100.0% of time when present
• Phage (with cluster) where this start called: ACFishhook_37 (A3), Aglet_38 (A3), Anubis_40 (A3), AugsMagnumOpus_40 (A3), Beauxregard13_38 (A3), Bigflo_38 (A3), BreSam8_38 (A3), Calvinny_38 (A3), ClownCar_38 (A3), Colbster_38 (A3), Croquant_39 (A3), Cullens_38 (A3), DaHudson_38 (A3), Dieselweasel_38 (A3), EpicPhail_38 (A3), Farber_38 (A3), Fernando_38 (A3), Gemma_37 (A3), GingkoMaracino_38 (A3), Grif_38 (A3), Groupthink_38 (A3), Grub_38 (A3), Grum1_38 (A3), GtownJaz_38 (A3), Gwennie_37 (A3), HaveUMetTed_38 (A3), Heliosoles_37 (A3), Hercules11_38 (A3), JHC117_38 (A3), JenCasNa_38 (A3), JeppNRM_38 (A3), Jobu08_37 (A3), Kalb97_38 (A3), Kalnoky_38 (A3), LBerry_38 (A3), Lilith_38 (A3), Lowa_38 (A3), LugYA_40 (A3), MadMarie_38 (A3), Mainiac_38 (A3), Malinsilva_40 (A3), Manu_38 (A3), MarQuardt_38 (A3), Marie_38 (A3), Marius_38 (A3), Microwolf_38 (A3), MoneyMay_38 (A3), Montavir_37 (A3), MuchMore_40 (A3), OlanP_37 (A3), Ollie_38 (A3), P28Green_38 (A3), PGHhamlin_40 (A3), Pawn_37 (A3), Pembroke_38 (A3), Penny1_38 (A3), PhishRPhriends_36 (A3), Phoebe_38 (A3), Phranny_38 (A3), PotatoSplit_39 (A3), PurpleHaze_37 (A3), Reba_38 (A3), Sabia_38 (A3), Sabinator_37 (A3), Snickers_38 (A3), SoYo_38 (A3), SoilDragon_37 (A3), Stagni_38 (A3), StepMih_38 (A3), Taurus_38 (A3), Tiffany_38 (A3), Vix_38 (A3), Watson_38 (A3), Wooldri_40 (A3), Zetzy_37 (A3),

Start 22:

• Found in 52 of 240 (21.7%) of genes in pham
• Manual Annotations of this start: 43 of 207
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Abdiel_34 (A4), B1_33 (A3), BabyJohn_34 (A3), BabyRay_35 (A3), BangNhom_35 (A4), BellusTerra_35 (A4), BlueBird_36 (A3), Bugatti_35 (A3), Cerulean_36 (A4), ChampagnePapi_36 (A4), Chiqui_34 (A3), Clammy_35 (A3), Commander_35 (A4), DropBear_35 (A3), Eagle_34 (A4), Eurydice_35 (A4), Fred313_35 (A3), Giroux_36 (A3), Heathen_35 (A3), HelDan_35 (A3), Idleandcovert_35 (A3), Isca_35 (A3), JF2_35 (A3), JF4_35 (A3), Kampy_35 (A4), LHTSCC_36 (A4), LeoAvram_35 (A4), MA5_35 (A3), MK4_35 (A3), Marchesa_35 (A3), Maxo_35 (A4), Medusa_35 (A4), Melvin_36 (A4), Morrow_35 (A4), Nebs_35 (A4), Obama12_36 (A4), Ohfah_35 (A4), Phantastic_35 (A3), Phelipe_35 (A4), Pistachio_36 (A3), Polymorphads_35 (A4), Puppy_36 (A3), Rockstar_35 (A3), Roimos_35 (A3), SaturnRing_35 (A3), Scout_35 (A3), SheldonCooper_36 (A4), Sparxx_35 (A4), TNguyen7_35 (A3), TinaFeyge_35 (A4), TroyPia_35 (A4), Zarafa_35 (A3),

Start 23:
• Found in 104 of 240 (43.3%) of genes in pham
• Manual Annotations of this start: 88 of 207
• Called 95.2% of time when present
• Phage (with cluster) where this start called: AN3_36 (A2), AN9_39 (A2), ANI8_39 (A2), AbbyPaige_38 (A2), Acolyte_37 (A2), Adzzy_38 (A2), Agape74_38 (A2), Anselm_38 (A2), BabyBack_36 (A2), Bactobuster_38 (A2), Baehexic_37 (A2), BiancaTri92_37 (A2), Bugsy_40 (A2), C3_34 (A2), Caraxes_37 (A2), Centaur_39 (A2), Che12_39 (A2), ChipMunk_39 (A2), Colin_40 (A2), Crucio_37 (A2), D29_36 (A2), D32_39 (A2), DBQu4n_39 (A2), Dalmatian_38 (A2), Dignity_38 (A2), Drake55_40 (A2), DudeLittle_36 (A2), Duplo_39 (A2), Equemioh13_39 (A2), EvilGenius_39 (A2), Fameo_37 (A2), FiringLine_37 (A2), Flare16_38 (A2), GaugeLDP_38 (A2), Georgie2_38 (A2), Gratitude_38 (A2), HarryHoudini_39 (A2), Heffalump_37 (A2), HippoHollow_36 (A2), IronMan_38 (A2), Iwokeuplikedis_37 (A2), Jaan_40 (A2), Jerm_38 (A2), JoshKayV_38 (A2), Jsquared_36 (A2), Kalpine_37 (A2), Kerberos_39 (A2), KingCyrus_39 (A2), Koduck_36 (A2), L5_36 (A2), Landor_38 (A2), Larenn_38 (A2), Leogania_37 (A2), Leviathan_38 (A2), LilTurb_37 (A2), LionsBait_38 (A2), MajorMajor_36 (A2), Malec_39 (A2), MiculUcigas_38 (A2), MissWhite_34 (A2), NaSiaTalie_38 (A2), Naji_39 (A2), NicoleTera_39 (A2), NothingSpecial_38 (A2), Odin_36 (A2), Ph8s_38 (A2), Phaded_41 (A2), Pharaoh_35 (A12), Piro94_37 (A2), Pomar16_39 (A2), Power_36 (A2), Pukovnik_37 (A2), QueenB2_37 (A2), QueenBeesly_37 (A2), Retro23_38 (A2), SemperFi_38 (A2), Sknot_38 (A2), Smeagan_39 (A2), SnapTap_37 (A2), StarStuff_39 (A2), Superchunk_36 (A2), SweetiePie_37 (A2), SwirlSquare_39 (A2), TarsusIV_37 (A2), Terrific_41 (A2), Tomathan_39 (A2), Travvers_39 (A2), Trixie_37 (A2), Trooper_39 (A2), Turbido_37 (A2), Updawg_39 (A2), VA6_36 (A2), VC3_39 (A2), WeiHuaDA_42 (A2), Whabigail7_37 (A2), WideWale_39 (A2), XianYue_37 (A2), Yecey3_38 (A9), Zimmer_38 (A12),

Summary by clusters:

There are 8 clusters represented in this pham: singleton, AD, A12, A3, A2, FE, A9, A4,

Info for manual annotations of cluster A12:
•Start number 23 was manually annotated 2 times for cluster A12.

Info for manual annotations of cluster A2:
•Start number 16 was manually annotated 3 times for cluster A2.
•Start number 23 was manually annotated 85 times for cluster A2.

Info for manual annotations of cluster A3:
•Start number 21 was manually annotated 68 times for cluster A3.
•Start number 22 was manually annotated 19 times for cluster A3.

Info for manual annotations of cluster A4:
•Start number 22 was manually annotated 24 times for cluster A4.

Info for manual annotations of cluster A9:
•Start number 23 was manually annotated 1 time for cluster A9.

Info for manual annotations of cluster AD:
•Start number 18 was manually annotated 1 time for cluster AD.

Info for manual annotations of cluster FE:
•Start number 20 was manually annotated 3 times for cluster FE.

Gene Information:
Gene: ACFishhook_37 Start: 27807, Stop: 27625, Start Num: 21
Candidate Starts for ACFishhook_37:
(Start: 21 @27807 has 68 MA's), (25, 27756), (35, 27654), (36, 27651),

Gene: AN3_36 Start: 27680, Stop: 27510, Start Num: 23
Candidate Starts for AN3_36:
(Start: 23 @27680 has 88 MA's), (25, 27635), (26, 27620), (29, 27584), (36, 27530),

Gene: AN9_39 Start: 27665, Stop: 27495, Start Num: 23
Candidate Starts for AN9_39:
(Start: 23 @27665 has 88 MA's), (25, 27620), (26, 27605), (29, 27569), (36, 27515),

Gene: ANI8_39 Start: 27665, Stop: 27495, Start Num: 23
Candidate Starts for ANI8_39:
(Start: 23 @27665 has 88 MA's), (25, 27620), (26, 27605), (29, 27569), (36, 27515),

Gene: AbbyPaige_38 Start: 28214, Stop: 28044, Start Num: 23
Candidate Starts for AbbyPaige_38:
(7, 28295), (Start: 23 @28214 has 88 MA's), (25, 28169), (32, 28091), (36, 28064),

Gene: Abdiel_34 Start: 27322, Stop: 27149, Start Num: 22
Candidate Starts for Abdiel_34:
(Start: 22 @27322 has 43 MA's), (25, 27274), (36, 27169),

Gene: Acolyte_37 Start: 28346, Stop: 28176, Start Num: 23
Candidate Starts for Acolyte_37:
(Start: 23 @28346 has 88 MA's), (25, 28301), (29, 28250), (36, 28196),

Gene: Adzzy_38 Start: 26529, Stop: 26359, Start Num: 23
Candidate Starts for Adzzy_38:
(Start: 23 @26529 has 88 MA's), (32, 26406), (36, 26379),

Gene: Agape74_38 Start: 28199, Stop: 28029, Start Num: 23
Candidate Starts for Agape74_38:
(7, 28280), (Start: 23 @28199 has 88 MA's), (25, 28154), (30, 28097), (32, 28076), (36, 28049),

Gene: Aglet_38 Start: 27905, Stop: 27723, Start Num: 21
Candidate Starts for Aglet_38:
(Start: 21 @27905 has 68 MA's), (25, 27854), (35, 27752), (36, 27749),

Gene: Anselm_38 Start: 28317, Stop: 28147, Start Num: 23
Candidate Starts for Anselm_38:
(7, 28398), (Start: 23 @28317 has 88 MA's), (36, 28167),

Gene: Anubis_40 Start: 27790, Stop: 27608, Start Num: 21
Candidate Starts for Anubis_40:
(Start: 21 @27790 has 68 MA's), (25, 27739), (35, 27637), (36, 27634),

Gene: AugsMagnumOpus_40 Start: 27896, Stop: 27714, Start Num: 21
Candidate Starts for AugsMagnumOpus_40:
(Start: 21 @27896 has 68 MA's), (25, 27845), (35, 27743), (36, 27740),

Gene: B1_33 Start: 26932, Stop: 26753, Start Num: 22
Candidate Starts for B1_33:
(Start: 22 @26932 has 43 MA's), (25, 26884), (36, 26779),

Gene: BabyBack_36 Start: 28565, Stop: 28377, Start Num: 23
Candidate Starts for BabyBack_36:
(13, 28604), (Start: 20 @28574 has 3 MA's), (Start: 23 @28565 has 88 MA's), (24, 28553), (26, 28505), (36, 28415),

Gene: BabyJohn_34 Start: 27705, Stop: 27526, Start Num: 22
Candidate Starts for BabyJohn_34:
(Start: 22 @27705 has 43 MA's), (25, 27657), (36, 27552),

Gene: BabyRay_35 Start: 27483, Stop: 27304, Start Num: 22
Candidate Starts for BabyRay_35:
(Start: 22 @27483 has 43 MA's), (25, 27435), (36, 27330),

Gene: Bactobuster_38 Start: 29229, Stop: 29059, Start Num: 23
Candidate Starts for Bactobuster_38:
(Start: 23 @29229 has 88 MA's), (29, 29133), (36, 29079),

Gene: Baehexic_37 Start: 28367, Stop: 28197, Start Num: 23
Candidate Starts for Baehexic_37:
(Start: 23 @28367 has 88 MA's), (29, 28271),

Gene: BangNhom_35 Start: 27659, Stop: 27486, Start Num: 22
Candidate Starts for BangNhom_35:
(Start: 22 @27659 has 43 MA's), (25, 27611), (36, 27506),

Gene: Beauxregard13_38 Start: 27904, Stop: 27722, Start Num: 21
Candidate Starts for Beauxregard13_38:
(Start: 21 @27904 has 68 MA's), (25, 27853), (35, 27751), (36, 27748),

Gene: BellusTerra_35 Start: 27322, Stop: 27149, Start Num: 22
Candidate Starts for BellusTerra_35:
(Start: 22 @27322 has 43 MA's), (25, 27274), (36, 27169),

Gene: BiancaTri92_37 Start: 28784, Stop: 28614, Start Num: 23
Candidate Starts for BiancaTri92_37:
(9, 28829), (Start: 23 @28784 has 88 MA's), (36, 28634),

Gene: Bigflo_38 Start: 27903, Stop: 27721, Start Num: 21
Candidate Starts for Bigflo_38:
(Start: 21 @27903 has 68 MA's), (25, 27852), (35, 27750), (36, 27747),

Gene: BlueBird_36 Start: 27412, Stop: 27233, Start Num: 22
Candidate Starts for BlueBird_36:
(Start: 22 @27412 has 43 MA's), (25, 27364), (36, 27259),

Gene: Bradman_36 Start: 26740, Stop: 26549, Start Num: 16
Candidate Starts for Bradman_36:
(3, 26863), (Start: 16 @26740 has 3 MA's), (Start: 23 @26719 has 88 MA's), (26, 26659), (36, 26569),

Gene: BreSam8_38 Start: 27897, Stop: 27715, Start Num: 21
Candidate Starts for BreSam8_38:
(Start: 21 @27897 has 68 MA's), (25, 27846), (35, 27744), (36, 27741),

Gene: Bugatti_35 Start: 27412, Stop: 27233, Start Num: 22
Candidate Starts for Bugatti_35:
(Start: 22 @27412 has 43 MA's), (25, 27364), (36, 27259),

Gene: Bugsy_40 Start: 28650, Stop: 28480, Start Num: 23
Candidate Starts for Bugsy_40:
(Start: 23 @28650 has 88 MA's), (29, 28554), (31, 28536), (36, 28500),

Gene: C3_34 Start: 27665, Stop: 27495, Start Num: 23
Candidate Starts for C3_34:
(Start: 23 @27665 has 88 MA's), (25, 27620), (26, 27605), (29, 27569), (36, 27515),

Gene: CabbageMan_18 Start: 13371, Stop: 13559, Start Num: 20
Candidate Starts for CabbageMan_18:
(2, 13179), (Start: 20 @13371 has 3 MA's), (26, 13440), (27, 13452),

Gene: Calvinny_38 Start: 27732, Stop: 27550, Start Num: 21
Candidate Starts for Calvinny_38:
(Start: 21 @27732 has 68 MA's), (25, 27681), (35, 27579), (36, 27576),

Gene: Caraxes_37 Start: 26412, Stop: 26242, Start Num: 23
Candidate Starts for Caraxes_37:
(Start: 23 @26412 has 88 MA's), (32, 26289), (36, 26262),

Gene: Centaur_39 Start: 28483, Stop: 28313, Start Num: 23

Candidate Starts for Centaur_39:
(Start: 23 @28483 has 88 MA's), (29, 28387), (32, 28360), (36, 28333),

Gene: Cerulean_36 Start: 27660, Stop: 27487, Start Num: 22
Candidate Starts for Cerulean_36:
(Start: 22 @27660 has 43 MA's), (25, 27612), (36, 27507),

Gene: ChampagnePapi_36 Start: 27659, Stop: 27486, Start Num: 22
Candidate Starts for ChampagnePapi_36:
(Start: 22 @27659 has 43 MA's), (25, 27611), (36, 27506),

Gene: Che12_39 Start: 26775, Stop: 26605, Start Num: 23
Candidate Starts for Che12_39:
(3, 26919), (Start: 16 @26796 has 3 MA's), (Start: 23 @26775 has 88 MA's), (29, 26679), (31, 26661),
(32, 26652),

Gene: CheeseDanish_20 Start: 13530, Stop: 13718, Start Num: 20
Candidate Starts for CheeseDanish_20:
(Start: 20 @13530 has 3 MA's), (26, 13599), (27, 13611),

Gene: ChipMunk_39 Start: 29644, Stop: 29474, Start Num: 23
Candidate Starts for ChipMunk_39:
(7, 29725), (Start: 23 @29644 has 88 MA's), (25, 29599), (36, 29494),

Gene: Chiqui_34 Start: 27714, Stop: 27535, Start Num: 22
Candidate Starts for Chiqui_34:
(Start: 22 @27714 has 43 MA's), (25, 27666), (36, 27561),

Gene: Clammy_35 Start: 27412, Stop: 27233, Start Num: 22
Candidate Starts for Clammy_35:
(Start: 22 @27412 has 43 MA's), (25, 27364), (36, 27259),

Gene: ClownCar_38 Start: 27724, Stop: 27542, Start Num: 21
Candidate Starts for ClownCar_38:
(Start: 21 @27724 has 68 MA's), (25, 27673), (26, 27658), (35, 27571), (36, 27568),

Gene: Colbster_38 Start: 27904, Stop: 27722, Start Num: 21
Candidate Starts for Colbster_38:
(Start: 21 @27904 has 68 MA's), (25, 27853), (35, 27751), (36, 27748),

Gene: Colin_40 Start: 28947, Stop: 28777, Start Num: 23
Candidate Starts for Colin_40:
(Start: 23 @28947 has 88 MA's), (36, 28797),

Gene: Commander_35 Start: 27323, Stop: 27150, Start Num: 22
Candidate Starts for Commander_35:
(Start: 22 @27323 has 43 MA's), (25, 27275), (36, 27170),

Gene: Corgi_20 Start: 13530, Stop: 13718, Start Num: 20
Candidate Starts for Corgi_20:
(Start: 20 @13530 has 3 MA's), (26, 13599), (27, 13611),

Gene: Croquant_39 Start: 27902, Stop: 27720, Start Num: 21

Candidate Starts for Croquant_39:
(Start: 21 @27902 has 68 MA's), (25, 27851), (35, 27749), (36, 27746),

Gene: Crucio_37 Start: 27910, Stop: 27740, Start Num: 23
Candidate Starts for Crucio_37:
(Start: 23 @27910 has 88 MA's), (36, 27760),

Gene: Cullens_38 Start: 27903, Stop: 27721, Start Num: 21
Candidate Starts for Cullens_38:
(Start: 21 @27903 has 68 MA's), (25, 27852), (35, 27750), (36, 27747),

Gene: D29_36 Start: 27596, Stop: 27426, Start Num: 23
Candidate Starts for D29_36:
(Start: 23 @27596 has 88 MA's), (25, 27551), (26, 27536), (29, 27500), (36, 27446),

Gene: D32_39 Start: 27596, Stop: 27426, Start Num: 23
Candidate Starts for D32_39:
(Start: 23 @27596 has 88 MA's), (25, 27551), (26, 27536), (29, 27500), (36, 27446),

Gene: DBQu4n_39 Start: 27596, Stop: 27426, Start Num: 23
Candidate Starts for DBQu4n_39:
(Start: 23 @27596 has 88 MA's), (25, 27551), (26, 27536), (29, 27500), (36, 27446),

Gene: DaHudson_38 Start: 27896, Stop: 27714, Start Num: 21
Candidate Starts for DaHudson_38:
(Start: 21 @27896 has 68 MA's), (25, 27845), (35, 27743), (36, 27740),

Gene: Dalmatian_38 Start: 28293, Stop: 28123, Start Num: 23
Candidate Starts for Dalmatian_38:
(7, 28374), (Start: 23 @28293 has 88 MA's), (36, 28143),

Gene: Dieselweasel_38 Start: 27906, Stop: 27724, Start Num: 21
Candidate Starts for Dieselweasel_38:
(Start: 21 @27906 has 68 MA's), (25, 27855), (35, 27753), (36, 27750),

Gene: Dignity_38 Start: 28279, Stop: 28109, Start Num: 23
Candidate Starts for Dignity_38:
(7, 28360), (Start: 23 @28279 has 88 MA's), (25, 28234), (32, 28156), (36, 28129),

Gene: Drake55_40 Start: 28546, Stop: 28376, Start Num: 23
Candidate Starts for Drake55_40:
(Start: 23 @28546 has 88 MA's), (29, 28450), (32, 28423), (36, 28396),

Gene: DropBear_35 Start: 27479, Stop: 27300, Start Num: 22
Candidate Starts for DropBear_35:
(Start: 22 @27479 has 43 MA's), (25, 27431), (36, 27326),

Gene: DudeLittle_36 Start: 27959, Stop: 27789, Start Num: 23
Candidate Starts for DudeLittle_36:
(7, 28040), (Start: 23 @27959 has 88 MA's), (36, 27809),

Gene: Duplo_39 Start: 27634, Stop: 27464, Start Num: 23
Candidate Starts for Duplo_39:

(Start: 23 @27634 has 88 MA's), (25, 27589), (26, 27574), (29, 27538), (36, 27484),

Gene: Eagle_34 Start: 27346, Stop: 27173, Start Num: 22
Candidate Starts for Eagle_34:
(Start: 22 @27346 has 43 MA's), (25, 27298), (36, 27193),

Gene: EpicPhail_38 Start: 27904, Stop: 27722, Start Num: 21
Candidate Starts for EpicPhail_38:
(Start: 21 @27904 has 68 MA's), (25, 27853), (35, 27751), (36, 27748),

Gene: Equemioh13_39 Start: 28486, Stop: 28316, Start Num: 23
Candidate Starts for Equemioh13_39:
(Start: 23 @28486 has 88 MA's), (29, 28390), (32, 28363), (36, 28336),

Gene: Eurydice_35 Start: 27321, Stop: 27148, Start Num: 22
Candidate Starts for Eurydice_35:
(Start: 22 @27321 has 43 MA's), (25, 27273), (36, 27168),

Gene: EvilGenius_39 Start: 29648, Stop: 29478, Start Num: 23
Candidate Starts for EvilGenius_39:
(7, 29729), (Start: 23 @29648 has 88 MA's), (25, 29603), (36, 29498),

Gene: Fameo_37 Start: 28087, Stop: 27917, Start Num: 23
Candidate Starts for Fameo_37:
(7, 28168), (Start: 23 @28087 has 88 MA's), (36, 27937),

Gene: Farber_38 Start: 27897, Stop: 27715, Start Num: 21
Candidate Starts for Farber_38:
(Start: 21 @27897 has 68 MA's), (25, 27846), (35, 27744), (36, 27741),

Gene: Fernando_38 Start: 27903, Stop: 27721, Start Num: 21
Candidate Starts for Fernando_38:
(Start: 21 @27903 has 68 MA's), (25, 27852), (35, 27750), (36, 27747),

Gene: FiringLine_37 Start: 27891, Stop: 27721, Start Num: 23
Candidate Starts for FiringLine_37:
(Start: 23 @27891 has 88 MA's), (36, 27741),

Gene: Flare16_38 Start: 28158, Stop: 27988, Start Num: 23
Candidate Starts for Flare16_38:
(Start: 23 @28158 has 88 MA's), (29, 28062), (31, 28044), (36, 28008),

Gene: Fred313_35 Start: 27164, Stop: 26985, Start Num: 22
Candidate Starts for Fred313_35:
(Start: 22 @27164 has 43 MA's), (25, 27116), (36, 27011),

Gene: GaugeLDP_38 Start: 28708, Stop: 28538, Start Num: 23
Candidate Starts for GaugeLDP_38:
(Start: 23 @28708 has 88 MA's), (28, 28621), (36, 28558),

Gene: Gemma_37 Start: 27728, Stop: 27546, Start Num: 21
Candidate Starts for Gemma_37:
(Start: 21 @27728 has 68 MA's), (25, 27677), (35, 27575), (36, 27572),

Gene: Georgie2_38 Start: 27936, Stop: 27766, Start Num: 23
Candidate Starts for Georgie2_38:
(5, 28050), (Start: 23 @27936 has 88 MA's), (36, 27786),

Gene: GingkoMaracino_38 Start: 27790, Stop: 27608, Start Num: 21
Candidate Starts for GingkoMaracino_38:
(Start: 21 @27790 has 68 MA's), (25, 27739), (35, 27637), (36, 27634),

Gene: Giroux_36 Start: 27411, Stop: 27232, Start Num: 22
Candidate Starts for Giroux_36:
(Start: 22 @27411 has 43 MA's), (25, 27363), (36, 27258),

Gene: Gratitude_38 Start: 28486, Stop: 28316, Start Num: 23
Candidate Starts for Gratitude_38:
(Start: 23 @28486 has 88 MA's), (29, 28390), (32, 28363), (36, 28336),

Gene: Grif_38 Start: 27978, Stop: 27796, Start Num: 21
Candidate Starts for Grif_38:
(Start: 21 @27978 has 68 MA's), (25, 27927), (35, 27825), (36, 27822),

Gene: Groupthink_38 Start: 27732, Stop: 27550, Start Num: 21
Candidate Starts for Groupthink_38:
(Start: 21 @27732 has 68 MA's), (25, 27681), (35, 27579), (36, 27576),

Gene: Grub_38 Start: 27896, Stop: 27714, Start Num: 21
Candidate Starts for Grub_38:
(Start: 21 @27896 has 68 MA's), (25, 27845), (35, 27743), (36, 27740),

Gene: Grum1_38 Start: 27903, Stop: 27721, Start Num: 21
Candidate Starts for Grum1_38:
(Start: 21 @27903 has 68 MA's), (25, 27852), (35, 27750), (36, 27747),

Gene: GtownJaz_38 Start: 27905, Stop: 27723, Start Num: 21
Candidate Starts for GtownJaz_38:
(Start: 21 @27905 has 68 MA's), (25, 27854), (35, 27752), (36, 27749),

Gene: Gwennie_37 Start: 27904, Stop: 27722, Start Num: 21
Candidate Starts for Gwennie_37:
(Start: 21 @27904 has 68 MA's), (25, 27853), (35, 27751), (36, 27748),

Gene: HarryHoudini_39 Start: 28432, Stop: 28262, Start Num: 23
Candidate Starts for HarryHoudini_39:
(Start: 23 @28432 has 88 MA's),

Gene: HaveUMetTed_38 Start: 27725, Stop: 27543, Start Num: 21
Candidate Starts for HaveUMetTed_38:
(Start: 21 @27725 has 68 MA's), (25, 27674), (26, 27659), (35, 27572), (36, 27569),

Gene: Heathen_35 Start: 27220, Stop: 27041, Start Num: 22
Candidate Starts for Heathen_35:
(Start: 22 @27220 has 43 MA's), (25, 27172), (36, 27067),

Gene: Heffalump_37 Start: 28819, Stop: 28649, Start Num: 23
Candidate Starts for Heffalump_37:
(7, 28900), (Start: 23 @28819 has 88 MA's), (29, 28723), (36, 28669),

Gene: HelDan_35 Start: 27472, Stop: 27293, Start Num: 22
Candidate Starts for HelDan_35:
(Start: 22 @27472 has 43 MA's), (25, 27424), (36, 27319),

Gene: Heliosoles_37 Start: 27732, Stop: 27550, Start Num: 21
Candidate Starts for Heliosoles_37:
(Start: 21 @27732 has 68 MA's), (25, 27681), (35, 27579), (36, 27576),

Gene: Hercules11_38 Start: 27912, Stop: 27730, Start Num: 21
Candidate Starts for Hercules11_38:
(Start: 21 @27912 has 68 MA's), (25, 27861), (35, 27759), (36, 27756),

Gene: HippoHollow_36 Start: 29237, Stop: 29067, Start Num: 23
Candidate Starts for HippoHollow_36:
(4, 29360), (8, 29312), (12, 29273), (Start: 23 @29237 has 88 MA's), (25, 29192), (36, 29087),

Gene: Idleandcovert_35 Start: 27412, Stop: 27233, Start Num: 22
Candidate Starts for Idleandcovert_35:
(Start: 22 @27412 has 43 MA's), (25, 27364), (36, 27259),

Gene: IronMan_38 Start: 29131, Stop: 28961, Start Num: 23
Candidate Starts for IronMan_38:
(Start: 23 @29131 has 88 MA's), (25, 29086), (32, 29008), (36, 28981),

Gene: Isca_35 Start: 27181, Stop: 27002, Start Num: 22
Candidate Starts for Isca_35:
(Start: 22 @27181 has 43 MA's), (25, 27133), (36, 27028),

Gene: Iwokeuplikedis_37 Start: 27530, Stop: 27360, Start Num: 23
Candidate Starts for Iwokeuplikedis_37:
(1, 27749), (15, 27554), (Start: 23 @27530 has 88 MA's), (36, 27380),

Gene: JF2_35 Start: 26932, Stop: 26753, Start Num: 22
Candidate Starts for JF2_35:
(Start: 22 @26932 has 43 MA's), (25, 26884), (36, 26779),

Gene: JF4_35 Start: 26932, Stop: 26753, Start Num: 22
Candidate Starts for JF4_35:
(Start: 22 @26932 has 43 MA's), (25, 26884), (36, 26779),

Gene: JHC117_38 Start: 27902, Stop: 27720, Start Num: 21
Candidate Starts for JHC117_38:
(Start: 21 @27902 has 68 MA's), (25, 27851), (35, 27749), (36, 27746),

Gene: Jaan_40 Start: 29710, Stop: 29540, Start Num: 23
Candidate Starts for Jaan_40:
(Start: 23 @29710 has 88 MA's), (25, 29665), (32, 29587), (36, 29560),

Gene: JenCasNa_38 Start: 27903, Stop: 27721, Start Num: 21

Candidate Starts for JenCasNa_38:
(Start: 21 @27903 has 68 MA's), (25, 27852), (35, 27750), (36, 27747),

Gene: JeppNRM_38 Start: 27730, Stop: 27548, Start Num: 21
Candidate Starts for JeppNRM_38:
(Start: 21 @27730 has 68 MA's), (25, 27679), (35, 27577), (36, 27574),

Gene: Jerm_38 Start: 28272, Stop: 28102, Start Num: 23
Candidate Starts for Jerm_38:
(7, 28353), (Start: 23 @28272 has 88 MA's), (25, 28227), (32, 28149), (36, 28122),

Gene: Jobu08_37 Start: 27733, Stop: 27551, Start Num: 21
Candidate Starts for Jobu08_37:
(Start: 21 @27733 has 68 MA's), (25, 27682), (35, 27580), (36, 27577),

Gene: JoshKayV_38 Start: 28235, Stop: 28065, Start Num: 23
Candidate Starts for JoshKayV_38:
(7, 28316), (Start: 23 @28235 has 88 MA's), (36, 28085),

Gene: Journey13_34 Start: 26962, Stop: 26771, Start Num: 16
Candidate Starts for Journey13_34:
(Start: 16 @26962 has 3 MA's), (Start: 23 @26941 has 88 MA's), (35, 26794), (36, 26791),

Gene: Jsquared_36 Start: 26790, Stop: 26620, Start Num: 23
Candidate Starts for Jsquared_36:
(Start: 16 @26811 has 3 MA's), (Start: 23 @26790 has 88 MA's), (35, 26643), (36, 26640),

Gene: KNG13_20 Start: 13527, Stop: 13715, Start Num: 20
Candidate Starts for KNG13_20:
(2, 13335), (Start: 20 @13527 has 3 MA's), (26, 13596), (27, 13608),

Gene: Kalb97_38 Start: 27731, Stop: 27549, Start Num: 21
Candidate Starts for Kalb97_38:
(Start: 21 @27731 has 68 MA's), (25, 27680), (35, 27578), (36, 27575),

Gene: Kalnoky_38 Start: 27732, Stop: 27550, Start Num: 21
Candidate Starts for Kalnoky_38:
(Start: 21 @27732 has 68 MA's), (25, 27681), (35, 27579), (36, 27576),

Gene: Kalpine_37 Start: 28631, Stop: 28461, Start Num: 23
Candidate Starts for Kalpine_37:
(Start: 23 @28631 has 88 MA's), (36, 28481),

Gene: Kampy_35 Start: 27323, Stop: 27150, Start Num: 22
Candidate Starts for Kampy_35:
(Start: 22 @27323 has 43 MA's), (25, 27275), (36, 27170),

Gene: Kerberos_39 Start: 27596, Stop: 27426, Start Num: 23
Candidate Starts for Kerberos_39:
(Start: 23 @27596 has 88 MA's), (25, 27551), (26, 27536), (29, 27500), (36, 27446),

Gene: KingCyrus_39 Start: 29643, Stop: 29473, Start Num: 23
Candidate Starts for KingCyrus_39:

(7, 29724), (Start: 23 @29643 has 88 MA's), (25, 29598), (36, 29493),

Gene: Koduck_36 Start: 26767, Stop: 26597, Start Num: 23
Candidate Starts for Koduck_36:
(Start: 23 @26767 has 88 MA's), (32, 26644),

Gene: L5_36 Start: 26727, Stop: 26557, Start Num: 23
Candidate Starts for L5_36:
(Start: 23 @26727 has 88 MA's), (32, 26604), (36, 26577),

Gene: LBerry_38 Start: 27904, Stop: 27722, Start Num: 21
Candidate Starts for LBerry_38:
(Start: 21 @27904 has 68 MA's), (25, 27853), (35, 27751), (36, 27748),

Gene: LHTSCC_36 Start: 27659, Stop: 27486, Start Num: 22
Candidate Starts for LHTSCC_36:
(Start: 22 @27659 has 43 MA's), (25, 27611), (36, 27506),

Gene: Landor_38 Start: 29245, Stop: 29075, Start Num: 23
Candidate Starts for Landor_38:
(Start: 23 @29245 has 88 MA's), (25, 29200), (36, 29095),

Gene: Larenn_38 Start: 28329, Stop: 28159, Start Num: 23
Candidate Starts for Larenn_38:
(Start: 23 @28329 has 88 MA's), (25, 28284), (29, 28233), (32, 28206), (36, 28179),

Gene: LauKoruNamu_19 Start: 13371, Stop: 13559, Start Num: 20
Candidate Starts for LauKoruNamu_19:
(2, 13179), (Start: 20 @13371 has 3 MA's), (26, 13440), (27, 13452),

Gene: LeoAvram_35 Start: 27321, Stop: 27148, Start Num: 22
Candidate Starts for LeoAvram_35:
(Start: 22 @27321 has 43 MA's), (25, 27273), (36, 27168),

Gene: Leogania_37 Start: 29148, Stop: 28978, Start Num: 23
Candidate Starts for Leogania_37:
(Start: 23 @29148 has 88 MA's), (36, 28998),

Gene: Leviathan_38 Start: 28328, Stop: 28158, Start Num: 23
Candidate Starts for Leviathan_38:
(7, 28409), (Start: 23 @28328 has 88 MA's), (25, 28283), (32, 28205), (36, 28178),

Gene: LilTurb_37 Start: 28161, Stop: 27991, Start Num: 23
Candidate Starts for LilTurb_37:
(7, 28242), (Start: 23 @28161 has 88 MA's), (25, 28116), (32, 28038), (36, 28011),

Gene: Lilith_38 Start: 27897, Stop: 27715, Start Num: 21
Candidate Starts for Lilith_38:
(Start: 21 @27897 has 68 MA's), (25, 27846), (35, 27744), (36, 27741),

Gene: LionsBait_38 Start: 29242, Stop: 29072, Start Num: 23
Candidate Starts for LionsBait_38:
(4, 29365), (Start: 23 @29242 has 88 MA's), (36, 29092),

Gene: Lowa_38 Start: 27896, Stop: 27714, Start Num: 21
Candidate Starts for Lowa_38:
(Start: 21 @27896 has 68 MA's), (25, 27845), (35, 27743), (36, 27740),

Gene: LugYA_40 Start: 27904, Stop: 27722, Start Num: 21
Candidate Starts for LugYA_40:
(Start: 21 @27904 has 68 MA's), (25, 27853), (35, 27751), (36, 27748),

Gene: MA5_35 Start: 27064, Stop: 26885, Start Num: 22
Candidate Starts for MA5_35:
(Start: 22 @27064 has 43 MA's), (25, 27016), (36, 26911),

Gene: MK4_35 Start: 27166, Stop: 26987, Start Num: 22
Candidate Starts for MK4_35:
(Start: 22 @27166 has 43 MA's), (25, 27118), (36, 27013),

Gene: MadMarie_38 Start: 27906, Stop: 27724, Start Num: 21
Candidate Starts for MadMarie_38:
(Start: 21 @27906 has 68 MA's), (25, 27855), (35, 27753), (36, 27750),

Gene: Mainiac_38 Start: 27897, Stop: 27715, Start Num: 21
Candidate Starts for Mainiac_38:
(Start: 21 @27897 has 68 MA's), (25, 27846), (35, 27744), (36, 27741),

Gene: MajorMajor_36 Start: 26719, Stop: 26549, Start Num: 23
Candidate Starts for MajorMajor_36:
(3, 26863), (Start: 16 @26740 has 3 MA's), (Start: 23 @26719 has 88 MA's), (26, 26659), (36, 26569),

Gene: Malec_39 Start: 28893, Stop: 28723, Start Num: 23
Candidate Starts for Malec_39:
(Start: 23 @28893 has 88 MA's), (36, 28743),

Gene: Malinsilva_40 Start: 27896, Stop: 27714, Start Num: 21
Candidate Starts for Malinsilva_40:
(Start: 21 @27896 has 68 MA's), (25, 27845), (35, 27743), (36, 27740),

Gene: Manu_38 Start: 27732, Stop: 27550, Start Num: 21
Candidate Starts for Manu_38:
(Start: 21 @27732 has 68 MA's), (25, 27681), (35, 27579), (36, 27576),

Gene: MarQuardt_38 Start: 27905, Stop: 27723, Start Num: 21
Candidate Starts for MarQuardt_38:
(Start: 21 @27905 has 68 MA's), (25, 27854), (35, 27752), (36, 27749),

Gene: Marchesa_35 Start: 27470, Stop: 27291, Start Num: 22
Candidate Starts for Marchesa_35:
(Start: 22 @27470 has 43 MA's), (25, 27422), (36, 27317),

Gene: Marie_38 Start: 27903, Stop: 27721, Start Num: 21
Candidate Starts for Marie_38:
(Start: 21 @27903 has 68 MA's), (25, 27852), (35, 27750), (36, 27747),

Gene: Marius_38 Start: 27732, Stop: 27550, Start Num: 21
Candidate Starts for Marius_38:
(Start: 21 @27732 has 68 MA's), (25, 27681), (35, 27579), (36, 27576),

Gene: Mask_83 Start: 58809, Stop: 59012, Start Num: 18
Candidate Starts for Mask_83:
(6, 58722), (Start: 18 @58809 has 1 MA's), (34, 58974),

Gene: Maxo_35 Start: 27323, Stop: 27150, Start Num: 22
Candidate Starts for Maxo_35:
(Start: 22 @27323 has 43 MA's), (25, 27275), (36, 27170),

Gene: Medusa_35 Start: 27323, Stop: 27150, Start Num: 22
Candidate Starts for Medusa_35:
(Start: 22 @27323 has 43 MA's), (25, 27275), (36, 27170),

Gene: Melvin_36 Start: 27322, Stop: 27149, Start Num: 22
Candidate Starts for Melvin_36:
(Start: 22 @27322 has 43 MA's), (25, 27274), (36, 27169),

Gene: Microwolf_38 Start: 27905, Stop: 27723, Start Num: 21
Candidate Starts for Microwolf_38:
(Start: 21 @27905 has 68 MA's), (25, 27854), (35, 27752), (36, 27749),

Gene: MiculUcigas_38 Start: 28157, Stop: 27987, Start Num: 23
Candidate Starts for MiculUcigas_38:
(Start: 23 @28157 has 88 MA's), (29, 28061), (31, 28043), (36, 28007),

Gene: MissWhite_34 Start: 26128, Stop: 25958, Start Num: 23
Candidate Starts for MissWhite_34:
(19, 26140), (Start: 23 @26128 has 88 MA's), (36, 25978),

Gene: MoneyMay_38 Start: 27903, Stop: 27721, Start Num: 21
Candidate Starts for MoneyMay_38:
(Start: 21 @27903 has 68 MA's), (25, 27852), (35, 27750), (36, 27747),

Gene: Montavir_37 Start: 27904, Stop: 27722, Start Num: 21
Candidate Starts for Montavir_37:
(Start: 21 @27904 has 68 MA's), (25, 27853), (35, 27751), (36, 27748),

Gene: Morrow_35 Start: 27327, Stop: 27154, Start Num: 22
Candidate Starts for Morrow_35:
(Start: 22 @27327 has 43 MA's), (25, 27279), (36, 27174),

Gene: MuchMore_40 Start: 27896, Stop: 27714, Start Num: 21
Candidate Starts for MuchMore_40:
(Start: 21 @27896 has 68 MA's), (25, 27845), (35, 27743), (36, 27740),

Gene: NaSiaTalie_38 Start: 28155, Stop: 27985, Start Num: 23
Candidate Starts for NaSiaTalie_38:
(Start: 23 @28155 has 88 MA's), (29, 28059), (31, 28041), (36, 28005),

Gene: Naji_39 Start: 27596, Stop: 27426, Start Num: 23

Candidate Starts for Naji_39:
(Start: 23 @27596 has 88 MA's), (25, 27551), (26, 27536), (29, 27500), (36, 27446),

Gene: Nebs_35 Start: 27321, Stop: 27148, Start Num: 22
Candidate Starts for Nebs_35:
(Start: 22 @27321 has 43 MA's), (25, 27273), (36, 27168),

Gene: Nebulanyx_20 Start: 13527, Stop: 13715, Start Num: 20
Candidate Starts for Nebulanyx_20:
(2, 13335), (Start: 20 @13527 has 3 MA's), (26, 13596), (27, 13608),

Gene: NicoleTera_39 Start: 28870, Stop: 28700, Start Num: 23
Candidate Starts for NicoleTera_39:
(Start: 23 @28870 has 88 MA's), (29, 28774), (36, 28720),

Gene: NothingSpecial_38 Start: 29153, Stop: 28983, Start Num: 23
Candidate Starts for NothingSpecial_38:
(7, 29249), (10, 29201), (Start: 23 @29153 has 88 MA's), (25, 29108), (26, 29093), (28, 29066), (36, 29003),

Gene: Obama12_36 Start: 27661, Stop: 27488, Start Num: 22
Candidate Starts for Obama12_36:
(Start: 22 @27661 has 43 MA's), (25, 27613), (36, 27508),

Gene: Odin_36 Start: 26579, Stop: 26409, Start Num: 23
Candidate Starts for Odin_36:
(Start: 23 @26579 has 88 MA's), (32, 26456), (36, 26429),

Gene: Ohfah_35 Start: 27321, Stop: 27148, Start Num: 22
Candidate Starts for Ohfah_35:
(Start: 22 @27321 has 43 MA's), (25, 27273), (36, 27168),

Gene: OlanP_37 Start: 27913, Stop: 27731, Start Num: 21
Candidate Starts for OlanP_37:
(Start: 21 @27913 has 68 MA's), (25, 27862), (26, 27847), (35, 27760), (36, 27757),

Gene: Ollie_38 Start: 27775, Stop: 27593, Start Num: 21
Candidate Starts for Ollie_38:
(Start: 21 @27775 has 68 MA's), (25, 27724), (35, 27622), (36, 27619),

Gene: P28Green_38 Start: 27906, Stop: 27724, Start Num: 21
Candidate Starts for P28Green_38:
(Start: 21 @27906 has 68 MA's), (25, 27855), (35, 27753), (36, 27750),

Gene: PGHhamlin_40 Start: 27896, Stop: 27714, Start Num: 21
Candidate Starts for PGHhamlin_40:
(Start: 21 @27896 has 68 MA's), (25, 27845), (35, 27743), (36, 27740),

Gene: Pauu_19 Start: 13371, Stop: 13559, Start Num: 20
Candidate Starts for Pauu_19:
(2, 13179), (Start: 20 @13371 has 3 MA's), (26, 13440), (27, 13452),

Gene: Pawn_37 Start: 27733, Stop: 27551, Start Num: 21

Candidate Starts for Pawn_37:
(Start: 21 @27733 has 68 MA's), (25, 27682), (35, 27580), (36, 27577),

Gene: Pembroke_38 Start: 27905, Stop: 27723, Start Num: 21
Candidate Starts for Pembroke_38:
(Start: 21 @27905 has 68 MA's), (25, 27854), (35, 27752), (36, 27749),

Gene: Penny1_38 Start: 27904, Stop: 27722, Start Num: 21
Candidate Starts for Penny1_38:
(Start: 21 @27904 has 68 MA's), (25, 27853), (35, 27751), (36, 27748),

Gene: Ph8s_38 Start: 26829, Stop: 26659, Start Num: 23
Candidate Starts for Ph8s_38:
(11, 26871), (Start: 23 @26829 has 88 MA's), (32, 26706), (36, 26679),

Gene: Phaded_41 Start: 29586, Stop: 29416, Start Num: 23
Candidate Starts for Phaded_41:
(Start: 23 @29586 has 88 MA's), (36, 29436),

Gene: Phantastic_35 Start: 27197, Stop: 27018, Start Num: 22
Candidate Starts for Phantastic_35:
(Start: 22 @27197 has 43 MA's), (25, 27149), (36, 27044),

Gene: Pharaoh_35 Start: 28307, Stop: 28137, Start Num: 23
Candidate Starts for Pharaoh_35:
(Start: 23 @28307 has 88 MA's), (29, 28211), (36, 28157),

Gene: Phelipe_35 Start: 27324, Stop: 27151, Start Num: 22
Candidate Starts for Phelipe_35:
(Start: 22 @27324 has 43 MA's), (25, 27276), (36, 27171),

Gene: PhishRPhriends_36 Start: 26910, Stop: 26728, Start Num: 21
Candidate Starts for PhishRPhriends_36:
(Start: 21 @26910 has 68 MA's), (25, 26859), (35, 26757), (36, 26754),

Gene: Phoebe_38 Start: 27896, Stop: 27714, Start Num: 21
Candidate Starts for Phoebe_38:
(Start: 21 @27896 has 68 MA's), (25, 27845), (35, 27743), (36, 27740),

Gene: Phranny_38 Start: 27718, Stop: 27536, Start Num: 21
Candidate Starts for Phranny_38:
(Start: 21 @27718 has 68 MA's), (25, 27667), (35, 27565), (36, 27562),

Gene: Piro94_37 Start: 28335, Stop: 28165, Start Num: 23
Candidate Starts for Piro94_37:
(Start: 23 @28335 has 88 MA's), (26, 28275), (29, 28239), (36, 28185),

Gene: Pistachio_36 Start: 26959, Stop: 26780, Start Num: 22
Candidate Starts for Pistachio_36:
(Start: 22 @26959 has 43 MA's), (25, 26911), (36, 26806),

Gene: Polymorphads_35 Start: 27320, Stop: 27147, Start Num: 22
Candidate Starts for Polymorphads_35:

(Start: 22 @27320 has 43 MA's), (25, 27272), (36, 27167),

Gene: Pomar16_39 Start: 27637, Stop: 27467, Start Num: 23
Candidate Starts for Pomar16_39:
(Start: 23 @27637 has 88 MA's), (25, 27592), (26, 27577), (29, 27541), (36, 27487),

Gene: PotatoSplit_39 Start: 27904, Stop: 27722, Start Num: 21
Candidate Starts for PotatoSplit_39:
(Start: 21 @27904 has 68 MA's), (25, 27853), (35, 27751), (36, 27748),

Gene: Power_36 Start: 27944, Stop: 27774, Start Num: 23
Candidate Starts for Power_36:
(Start: 23 @27944 has 88 MA's), (36, 27794),

Gene: Pukovnik_37 Start: 28796, Stop: 28626, Start Num: 23
Candidate Starts for Pukovnik_37:
(Start: 23 @28796 has 88 MA's), (25, 28751), (36, 28646),

Gene: Puppy_36 Start: 27029, Stop: 26850, Start Num: 22
Candidate Starts for Puppy_36:
(Start: 22 @27029 has 43 MA's), (25, 26981), (36, 26876),

Gene: PurpleHaze_37 Start: 27731, Stop: 27549, Start Num: 21
Candidate Starts for PurpleHaze_37:
(Start: 21 @27731 has 68 MA's), (25, 27680), (35, 27578), (36, 27575),

Gene: QueenB2_37 Start: 28005, Stop: 27835, Start Num: 23
Candidate Starts for QueenB2_37:
(7, 28086), (Start: 23 @28005 has 88 MA's), (36, 27855),

Gene: QueenBeesly_37 Start: 27891, Stop: 27721, Start Num: 23
Candidate Starts for QueenBeesly_37:
(Start: 23 @27891 has 88 MA's), (36, 27741),

Gene: Quokka_35 Start: 26740, Stop: 26549, Start Num: 16
Candidate Starts for Quokka_35:
(3, 26863), (Start: 16 @26740 has 3 MA's), (Start: 23 @26719 has 88 MA's), (26, 26659), (36, 26569),

Gene: Reba_38 Start: 27391, Stop: 27209, Start Num: 21
Candidate Starts for Reba_38:
(Start: 21 @27391 has 68 MA's), (25, 27340), (35, 27238), (36, 27235),

Gene: Retro23_38 Start: 28289, Stop: 28119, Start Num: 23
Candidate Starts for Retro23_38:
(7, 28370), (Start: 23 @28289 has 88 MA's), (36, 28139),

Gene: Rockstar_35 Start: 27173, Stop: 26994, Start Num: 22
Candidate Starts for Rockstar_35:
(Start: 22 @27173 has 43 MA's), (25, 27125), (36, 27020),

Gene: Roimos_35 Start: 27388, Stop: 27209, Start Num: 22
Candidate Starts for Roimos_35:
(Start: 22 @27388 has 43 MA's), (25, 27340), (36, 27235),

Gene: Sabia_38 Start: 27897, Stop: 27715, Start Num: 21
Candidate Starts for Sabia_38:
(Start: 21 @27897 has 68 MA's), (25, 27846), (35, 27744), (36, 27741),

Gene: Sabinator_37 Start: 27902, Stop: 27720, Start Num: 21
Candidate Starts for Sabinator_37:
(Start: 21 @27902 has 68 MA's), (25, 27851), (35, 27749), (36, 27746),

Gene: SaturnRing_35 Start: 27412, Stop: 27233, Start Num: 22
Candidate Starts for SaturnRing_35:
(Start: 22 @27412 has 43 MA's), (25, 27364), (36, 27259),

Gene: Scout_35 Start: 26719, Stop: 26540, Start Num: 22
Candidate Starts for Scout_35:
(Start: 22 @26719 has 43 MA's), (25, 26671), (36, 26566),

Gene: SemperFi_38 Start: 28159, Stop: 27989, Start Num: 23
Candidate Starts for SemperFi_38:
(Start: 23 @28159 has 88 MA's), (36, 28009),

Gene: Serenity_37 Start: 26863, Stop: 26672, Start Num: 16
Candidate Starts for Serenity_37:
(3, 26986), (Start: 16 @26863 has 3 MA's), (Start: 23 @26842 has 88 MA's), (35, 26695), (36, 26692),

Gene: Shambre1_51 Start: 32314, Stop: 32526, Start Num: 14
Candidate Starts for Shambre1_51:
(Start: 14 @32314 has 1 MA's),

Gene: SheldonCooper_36 Start: 27660, Stop: 27487, Start Num: 22
Candidate Starts for SheldonCooper_36:
(Start: 22 @27660 has 43 MA's), (25, 27612), (36, 27507),

Gene: Sknot_38 Start: 28158, Stop: 27988, Start Num: 23
Candidate Starts for Sknot_38:
(Start: 23 @28158 has 88 MA's), (29, 28062), (31, 28044), (36, 28008),

Gene: Smeagan_39 Start: 28415, Stop: 28245, Start Num: 23
Candidate Starts for Smeagan_39:
(7, 28496), (Start: 23 @28415 has 88 MA's), (25, 28370), (32, 28292), (36, 28265),

Gene: SnapTap_37 Start: 27970, Stop: 27800, Start Num: 23
Candidate Starts for SnapTap_37:
(Start: 23 @27970 has 88 MA's), (36, 27820),

Gene: Snickers_38 Start: 27877, Stop: 27695, Start Num: 21
Candidate Starts for Snickers_38:
(Start: 21 @27877 has 68 MA's), (25, 27826), (35, 27724), (36, 27721),

Gene: SoYo_38 Start: 27815, Stop: 27633, Start Num: 21
Candidate Starts for SoYo_38:
(Start: 21 @27815 has 68 MA's), (25, 27764), (35, 27662), (36, 27659),

Gene: SoilDragon_37 Start: 27349, Stop: 27167, Start Num: 21
Candidate Starts for SoilDragon_37:
(Start: 21 @27349 has 68 MA's), (25, 27298), (35, 27196), (36, 27193),

Gene: Sparxx_35 Start: 27322, Stop: 27149, Start Num: 22
Candidate Starts for Sparxx_35:
(Start: 22 @27322 has 43 MA's), (25, 27274), (36, 27169),

Gene: Stagni_38 Start: 27906, Stop: 27724, Start Num: 21
Candidate Starts for Stagni_38:
(Start: 21 @27906 has 68 MA's), (25, 27855), (35, 27753), (36, 27750),

Gene: StarStuff_39 Start: 27599, Stop: 27429, Start Num: 23
Candidate Starts for StarStuff_39:
(Start: 23 @27599 has 88 MA's), (25, 27554), (26, 27539), (29, 27503), (36, 27449),

Gene: StepMih_38 Start: 27897, Stop: 27715, Start Num: 21
Candidate Starts for StepMih_38:
(Start: 21 @27897 has 68 MA's), (25, 27846), (35, 27744), (36, 27741),

Gene: Superchunk_36 Start: 26412, Stop: 26242, Start Num: 23
Candidate Starts for Superchunk_36:
(Start: 23 @26412 has 88 MA's), (32, 26289), (36, 26262),

Gene: SweetiePie_37 Start: 27970, Stop: 27800, Start Num: 23
Candidate Starts for SweetiePie_37:
(Start: 23 @27970 has 88 MA's), (36, 27820),

Gene: SwirlSquare_39 Start: 26439, Stop: 26269, Start Num: 23
Candidate Starts for SwirlSquare_39:
(Start: 23 @26439 has 88 MA's), (29, 26343),

Gene: TNguyen7_35 Start: 27376, Stop: 27197, Start Num: 22
Candidate Starts for TNguyen7_35:
(Start: 22 @27376 has 43 MA's), (25, 27328), (36, 27223),

Gene: TarsusIV_37 Start: 28077, Stop: 27907, Start Num: 23
Candidate Starts for TarsusIV_37:
(Start: 23 @28077 has 88 MA's), (30, 27975), (36, 27927),

Gene: Taurus_38 Start: 27903, Stop: 27721, Start Num: 21
Candidate Starts for Taurus_38:
(Start: 21 @27903 has 68 MA's), (25, 27852), (35, 27750), (36, 27747),

Gene: Terrific_41 Start: 28498, Stop: 28328, Start Num: 23
Candidate Starts for Terrific_41:
(Start: 23 @28498 has 88 MA's), (29, 28402), (32, 28375), (36, 28348),

Gene: Tiffany_38 Start: 27789, Stop: 27607, Start Num: 21
Candidate Starts for Tiffany_38:
(Start: 21 @27789 has 68 MA's), (25, 27738), (35, 27636), (36, 27633),

Gene: TinaFeyge_35 Start: 27319, Stop: 27146, Start Num: 22

Candidate Starts for TinaFeyge_35:
(Start: 22 @27319 has 43 MA's), (25, 27271), (36, 27166),

Gene: TipsytheTRex_35 Start: 27089, Stop: 26898, Start Num: 16
Candidate Starts for TipsytheTRex_35:
(3, 27212), (Start: 16 @27089 has 3 MA's), (Start: 23 @27068 has 88 MA's), (26, 27008), (36, 26918),

Gene: Tomathan_39 Start: 27596, Stop: 27426, Start Num: 23
Candidate Starts for Tomathan_39:
(Start: 23 @27596 has 88 MA's), (25, 27551), (26, 27536), (29, 27500), (36, 27446),

Gene: Travvers_39 Start: 27596, Stop: 27426, Start Num: 23
Candidate Starts for Travvers_39:
(Start: 23 @27596 has 88 MA's), (25, 27551), (26, 27536), (29, 27500), (36, 27446),

Gene: Trixie_37 Start: 28496, Stop: 28326, Start Num: 23
Candidate Starts for Trixie_37:
(Start: 23 @28496 has 88 MA's), (36, 28346),

Gene: Trooper_39 Start: 28311, Stop: 28141, Start Num: 23
Candidate Starts for Trooper_39:
(Start: 23 @28311 has 88 MA's), (36, 28161),

Gene: TroyPia_35 Start: 27322, Stop: 27149, Start Num: 22
Candidate Starts for TroyPia_35:
(Start: 22 @27322 has 43 MA's), (25, 27274), (36, 27169),

Gene: Turbido_37 Start: 28155, Stop: 27985, Start Num: 23
Candidate Starts for Turbido_37:
(7, 28236), (Start: 23 @28155 has 88 MA's), (25, 28110), (30, 28053), (32, 28032), (36, 28005),

Gene: Updawg_39 Start: 28486, Stop: 28316, Start Num: 23
Candidate Starts for Updawg_39:
(Start: 23 @28486 has 88 MA's), (29, 28390), (32, 28363), (36, 28336),

Gene: VA6_36 Start: 27677, Stop: 27507, Start Num: 23
Candidate Starts for VA6_36:
(Start: 23 @27677 has 88 MA's), (25, 27632), (26, 27617), (29, 27581), (36, 27527),

Gene: VC3_39 Start: 27665, Stop: 27495, Start Num: 23
Candidate Starts for VC3_39:
(Start: 23 @27665 has 88 MA's), (25, 27620), (26, 27605), (29, 27569), (36, 27515),

Gene: Vix_38 Start: 27986, Stop: 27804, Start Num: 21
Candidate Starts for Vix_38:
(Start: 21 @27986 has 68 MA's), (25, 27935), (35, 27833), (36, 27830),

Gene: Watson_38 Start: 27896, Stop: 27714, Start Num: 21
Candidate Starts for Watson_38:
(Start: 21 @27896 has 68 MA's), (25, 27845), (35, 27743), (36, 27740),

Gene: WeiHuaDA_42 Start: 29572, Stop: 29402, Start Num: 23
Candidate Starts for WeiHuaDA_42:

(Start: 23 @29572 has 88 MA's), (29, 29476), (36, 29422),

Gene: Whabigail7_37 Start: 28143, Stop: 27973, Start Num: 23
Candidate Starts for Whabigail7_37:
(7, 28224), (Start: 23 @28143 has 88 MA's), (25, 28098), (32, 28020), (36, 27993),

Gene: WideWale_39 Start: 28486, Stop: 28316, Start Num: 23
Candidate Starts for WideWale_39:
(Start: 23 @28486 has 88 MA's), (29, 28390), (32, 28363), (36, 28336),

Gene: Wooldri_40 Start: 27815, Stop: 27633, Start Num: 21
Candidate Starts for Wooldri_40:
(Start: 21 @27815 has 68 MA's), (25, 27764), (35, 27662), (36, 27659),

Gene: XianYue_37 Start: 27771, Stop: 27601, Start Num: 23
Candidate Starts for XianYue_37:
(Start: 23 @27771 has 88 MA's), (36, 27621),

Gene: Yecey3_38 Start: 27629, Stop: 27459, Start Num: 23
Candidate Starts for Yecey3_38:
(Start: 23 @27629 has 88 MA's), (35, 27482), (36, 27479),

Gene: Zarafa_35 Start: 27481, Stop: 27302, Start Num: 22
Candidate Starts for Zarafa_35:
(Start: 22 @27481 has 43 MA's), (25, 27433), (36, 27328),

Gene: Zetzy_37 Start: 27467, Stop: 27285, Start Num: 21
Candidate Starts for Zetzy_37:
(Start: 21 @27467 has 68 MA's), (25, 27416), (35, 27314), (36, 27311),

Gene: Zimmer_38 Start: 29474, Stop: 29304, Start Num: 23
Candidate Starts for Zimmer_38:
(17, 29492), (Start: 23 @29474 has 88 MA's), (32, 29351), (33, 29336), (36, 29324),